

WHAT IS CLAIMED IS:

1 1. A computer-implemented method of generating a paper document for a
2 electronically stored multimedia document storing multimedia information, the multimedia
3 information including video information, the method comprising:
4 accepting user input identifying a first concept of interest;
5 analyzing the multimedia information stored by the multimedia document to
6 identify information relevant to the first concept of interest; and
7 printing the multimedia information on a paper medium to generate the paper
8 document comprising one or more printed pages, wherein information that is identified to be
9 relevant to the first concept of interest is annotated when printed on one the more pages.

1 2. The method of claim 1 wherein the user input identifying the first
2 concept of interest is stored in a user profile.

1 3. The method of claim 1 further comprising:
2 printing a relevance indicator on at least one page of the one or more pages,
3 the relevance indicator indicating a degree of relevance of the multimedia information stored
4 by the multimedia document to the first concept of interest.

1 4. The method of claim 1 further comprising:
2 accepting user input identifying a second concept of interest;
3 analyzing the multimedia information stored by the multimedia document to
4 identify information relevant to the second concept of interest; and
5 printing the multimedia information on the one or more printed pages such
6 that the information that is identified to be relevant to the second concept of interest is
7 annotated when printed on the one or more pages.

1 5. The method of claim 4 wherein the information printed on the one or
2 more pages that is relevant to the first topic of interest is annotated using a first style and the
3 information printed on the one or more pages that is relevant to the second topic of interest is
4 annotated using a second style different from the first style.

1 6. The method of claim 1 wherein the multimedia information comprises
2 audio information, and wherein:
3 analyzing the multimedia information comprises:

4 generating a text transcript for the audio information; and
5 analyzing the text transcript to identify information in the text
6 transcript that is relevant to the first concept of interest; and
7 printing the multimedia information on the paper medium comprises:
8 printing the text transcript on the one or more pages such that the
9 information in the text transcript identified to be relevant to the first concept of interest is
10 annotated when printed on the one or more pages.

1 7. The method of claim 6 wherein:

2 accepting user input identifying the first concept of interest comprises
3 receiving information identifying a plurality of words associated with the first concept of
4 interest; and

5 analyzing the text transcript comprises identifying words in the text transcript
6 that match words in the plurality of words associated with the first concept of interest; and
7 printing the text transcript on the one or more pages comprises annotating the
8 one or more words in the text transcript printed on the one or more pages that matched words
9 in the plurality of words associated with the first concept of interest.

1 8. The method of claim 1 wherein the multimedia information comprises
2 closed-caption text information, and wherein:

3 analyzing the multimedia information comprises analyzing the closed-caption
4 text information to identify text information that is relevant to the first concept of interest;
5 and

6 printing the multimedia information on the paper medium comprises printing
7 the closed-caption text on the one or more pages such that the text information printed on the
8 one or more pages that is identified to be relevant to the first concept of interest is annotated.

1 9. The method of claim 8 wherein:

2 accepting user input identifying the first concept of interest comprises
3 receiving information identifying a plurality of words associated with the first concept of
4 interest;

5 analyzing the closed-caption text information comprises identifying words in
6 the closed-caption text information that match words in the plurality of words associated with
7 the first concept of interest; and

8 printing the closed-caption text information on the one or more pages
9 comprises annotating the one or more words in the closed-caption text information printed on
10 the one or more pages that matched words in the plurality of words associated with the first
11 concept of interest.

1 10. The method of claim 1 wherein:
2 accepting user input identifying the first concept of interest comprises
3 receiving information identifying video features associated with the first concept of interest;
4 analyzing the multimedia information comprises:
5 extracting a plurality of video frames from the video information; and
6 analyzing the plurality of video frames to identify one or more video
7 frames that comprise at least one video feature from the video features associated with the
8 first concept of interest; and

9 printing the multimedia information on the paper medium comprises printing
10 the one or more video frames on the one or more pages with annotations.

11 11. The method of claim 1 wherein:
12 analyzing the multimedia information stored by the multimedia document to
13 identify information relevant to the first concept of interest comprises:
14 generating a printable representation for the multimedia information
15 stored by the multimedia document, the printable representation capable of being printed on a
16 paper medium;

7 searching the printable representation to identify one or more sections
8 of the printable representation that comprise information relevant to the first concept of
9 interest; and

10 annotating the one or more sections of the printable representation
11 identified to comprise information relevant to the first concept of interest; and

12 printing the multimedia information on a paper medium to generate the one or
13 more printed pages comprises printing the printable representation on the one or more pages
14 such that the one or more sections of the printable representation identified to comprise
15 information relevant to the first concept of interest are annotated when printed on the one or
16 more pages.

1 12. A paper document which comprises:

2 one or more pages, wherein at least one page of the one or more pages is
3 imprinted with text information extracted from multimedia information stored electronically
4 in a multimedia document and imprinted with one or more video frames extracted from the
5 multimedia information stored by the multimedia document, wherein portions of the text
6 information printed on the at least one page and related to a topic of interest are annotated.

1 13. The paper document as recited in claim 12, wherein the portions of the
2 printed text information that are annotated comprise words associated with the topic of
3 interest.

1 14. The paper document as recited in claim 12, wherein at least one video
2 frame from the one or more video frames printed on the at least one page that is related to the
3 topic of interest is annotated.

1 15. The paper document as recited in claim 12 wherein the text
2 information is extracted from audio information included in the multimedia information
3 stored by the multimedia document.

1 16. The paper document as recited in claim 12 wherein the text
2 information is extracted from closed-caption text information included in the multimedia
3 information stored by the multimedia document.

1 17. The paper document as recited in claim 12 wherein the one or more
2 video frames are extracted from video information included in the multimedia information
3 stored by the multimedia document.

1 18. A system for generating a paper document for a electronically stored
2 multimedia document storing multimedia information, the multimedia information including
3 video information, the system comprising:

4 a processor; and

5 a memory coupled to the processor, the memory configured to store a plurality
6 of code modules for execution by the processor, the plurality of code modules comprising:

7 a code module for accepting user input identifying a first concept of
8 interest;

9 a code module for analyzing the multimedia information stored by the
10 multimedia document to identify information relevant to the first concept of interest; and

11 a code module for printing the multimedia information on a paper
12 medium to generate one or more printed pages such that the information that is identified to
13 be relevant to the first concept of interest is annotated when printed on the one or more pages,
14 the one or more pages comprising one or more pages.

1 19. The system of claim 18 wherein the user input identifying the first
2 concept of interest is stored in a user profile.

1 20. The system of claim 18, wherein the plurality of code modules further
2 comprises:
3 a code module for printing a relevance indicator on at least one page from the
4 one or more pages, the relevance indicator indicating a degree of relevance of the multimedia
5 information stored by the multimedia document to the first concept of interest.

1 21. The system of claim 18, wherein the plurality of code modules further
2 comprises:
3 a code module for accepting user input identifying a second concept of
4 interest;
5 a code module for analyzing the multimedia information stored by the
6 multimedia document to identify information relevant to the second concept of interest; and
7 a code module for printing the multimedia information on the one or more
8 printed pages such that the information that is identified to be relevant to the second concept
9 of interest is annotated when printed on the one or more pages.

1 22. The system of claim 21 wherein the information printed on the one or
2 more pages that is relevant to the first topic of interest is annotated using a first style and the
3 information printed on the one or more pages that is relevant to the second topic of interest is
4 annotated using a second style different from the first style.

1 23. The system of claim 18 wherein the multimedia information comprises
2 audio information, and wherein:
3 the code module for analyzing the multimedia information comprises:
4 a code module for generating a text transcript for the audio
5 information; and
6 a code module for analyzing the text transcript to identify information
7 in the text transcript that is relevant to the first concept of interest; and

the code module for printing the multimedia information on the paper medium comprises:

a code module for printing the text transcript on the one or more pages such that the information in the text transcript identified to be relevant to the first concept of interest is annotated when printed on the one or more pages.

24. The system of claim 23 wherein:

the code module for accepting user input identifying the first concept of interest comprises a code module for receiving information identifying a plurality of words associated with the first concept of interest; and

the code module for analyzing the text transcript comprises a code module for identifying words in the text transcript that match words in the plurality of words associated with the first concept of interest; and

the code module for printing the text transcript on the one or more pages comprises a code module for annotating the one or more words in the text transcript printed on the one or more pages that matched words in the plurality of words associated with the first concept of interest.

25. The system of claim 18 wherein the multimedia information comprises closed-caption text information, and wherein:

the code module for analyzing the multimedia information comprises a code module for analyzing the closed-caption text information to identify text information that is relevant to the first concept of interest; and

the code module for printing the multimedia information on the paper medium comprises a code module for printing the closed-caption text on the one or more pages such that the text information printed on the one or more pages that is identified to be relevant to the first concept of interest is annotated.

26. The system of claim 25 wherein:

the code module for accepting user input identifying the first concept of interest comprises a code module for receiving information identifying a plurality of words associated with the first concept of interest;

the code module for analyzing the closed-caption text information comprises a code module for identifying words in the closed-caption text information that match words in the plurality of words associated with the first concept of interest; and

8 the code module for printing the closed-caption text information on the one or
9 more pages comprises a code module for annotating the one or more words in the closed-
10 caption text information printed on the one or more pages that matched words in the plurality
11 of words associated with the first concept of interest.

1 27. The system of claim 18 wherein:
2 the code module for accepting user input identifying the first concept of
3 interest comprises a code module for receiving information identifying video features
4 associated with the first concept of interest;
5 the code module for analyzing the multimedia information comprises:
6 a code module for extracting a plurality of video frames from the video
7 information; and
8 a code module for analyzing the plurality of video frames to identify
9 one or more video frames that comprise at least one video feature from the video features
10 associated with the first concept of interest; and
11 the code module for printing the multimedia information on the paper medium
12 comprises a code module for printing the one or more video frames on the one or more pages
13 with annotations.

1 28. The system of claim 18 wherein:
2 the code module for analyzing the multimedia information stored by the
3 multimedia document to identify information relevant to the first concept of interest
4 comprises:
5 a code module for generating a printable representation for the
6 multimedia information stored by the multimedia document, the printable representation
7 capable of being printed on a paper medium;
8 a code module for searching the printable representation to identify one
9 or more sections of the printable representation that comprise information relevant to the first
10 concept of interest; and
11 a code module for annotating the one or more sections of the printable
12 representation identified to comprise information relevant to the first concept of interest; and
13 the code module for printing the multimedia information on a paper medium
14 to generate the one or more printed pages comprises a code module for printing the printable
15 representation on the one or more pages such that the one or more sections of the printable

16 representation identified to comprise information relevant to the first concept of interest are
17 annotated when printed on the one or more pages.

1 29. A computer program product stored on a computer-readable storage
2 medium for generating a paper document for a electronically stored multimedia document
3 storing multimedia information, the multimedia information including video information, the
4 computer program product comprising:
5 code for accepting user input identifying a first concept of interest;
6 code for analyzing the multimedia information stored by the multimedia
7 document to identify information relevant to the first concept of interest; and
8 code for printing the multimedia information on a paper medium to generate
9 the paper document comprising one or more printed pages such that the information that is
10 identified to be relevant to the first concept of interest is annotated when printed on the one or
11 more pages, the one or more pages comprising one or more pages.

1 30. The computer program product of claim 29 wherein the multimedia
2 information comprises audio information, and wherein:
3 the code for analyzing the multimedia information comprises:
4 code for generating a text transcript for the audio information; and
5 code for analyzing the text transcript to identify information in the text
6 transcript that is relevant to the first concept of interest; and
7 the code for printing the multimedia information on the paper medium
8 comprises:
9 code for printing the text transcript on the one or more pages such that
10 the information in the text transcript identified to be relevant to the first concept of interest is
11 annotated when printed on the one or more pages.

1 31. The computer program product of claim 29 wherein the multimedia
2 information comprises closed-caption text information, and wherein:
3 the code for analyzing the multimedia information comprises code for
4 analyzing the closed-caption text information to identify text information that is relevant to
5 the first concept of interest; and
6 the code for printing the multimedia information on the paper medium
7 comprises code for printing the closed-caption text on the one or more pages such that the

8 text information printed on the one or more pages that is identified to be relevant to the first
9 concept of interest is annotated.

1 32. The computer program product of claim 29 wherein:
2 the code for accepting user input identifying the first concept of interest
3 comprises receiving information identifying video features associated with the first concept
4 of interest;
5 the code for analyzing the multimedia information comprises:
6 code for extracting a plurality of video frames from the video
7 information; and
8 code for analyzing the plurality of video frames to identify one or more
9 video frames that comprise at least one video feature from the video features associated with
10 the first concept of interest; and
11 the code for printing the multimedia information on the paper medium
12 comprises code for printing the one or more video frames on the one or more pages with
13 annotations.

14 33. The computer program product of claim 29 wherein:
15 the code for analyzing the multimedia information stored by the multimedia
16 document to identify information relevant to the first concept of interest comprises:
17 code for generating a printable representation for the multimedia
18 information stored by the multimedia document, the printable representation capable of being
19 printed on a paper medium;
20 code for searching the printable representation to identify one or more
21 sections of the printable representation that comprise information relevant to the first concept
22 of interest; and
23 code for annotating the one or more sections of the printable
24 representation identified to comprise information relevant to the first concept of interest; and
25 the code for printing the multimedia information on a paper medium to
26 generate the one or more printed pages comprises code for printing the printable
27 representation on the one or more pages such that the one or more sections of the printable
28 representation identified to comprise information relevant to the first concept of interest are
29 annotated when printed on the one or more pages.